# Idaho Department of Fish and Game Bull Trout Conservation Program Plan and 2000 Report November 17, 2001 Revised February 2003

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#### Section 1 – The Plan

## Introduction

On June 10, 1998 the United States Fish and Wildlife Service (Service) listed in the Federal Register (63 FR 31647), the Columbia River and Klamath River population segments of bull trout Salvelinus confluentus as threatened under authority of the Endangered Species Act of 1973, as amended (Act). Under Section 6 (c) 1 of the Act, the Secretary of the Interior, "... is authorized to enter into a cooperative agreement in accordance with this section with any State which establishes and maintains an adequate and active program for the conservation of endangered species and threatened species." Further, under Section 6 (c) 1 (B) of the Act, State agencies must establish acceptable conservation programs consistent with the purposes and policies of the Act and furnish, " . . . a copy of such plan and program together with all pertinent details, information, and data requested to the Secretary." The Idaho Department of Fish and Game (Department) prepared this document, which describes the Department's management program for bull trout, to meet the provisions contained in Section 6 of the Act and to comport with the spirit of Section 10 (a) 1 (A). This plan identifies the benefits to bull trout resulting from management and research programs conducted or authorized by the State. The Service will then make a determination whether this program is in accordance with this Act and annually thereafter reconfirm such finding. The plan/report is due to the Service by March 31 each year.

Sport fishing rules have not allowed legal harvest of bull trout in most of the state since 1994 and prohibited harvest statewide in 1996. Additionally, the Department has issued scientific collecting permits for over 30 years to investigators involved in bull trout work or working in bull trout waters. Authority to permit scientific collecting activities is found in <u>Idaho Code</u>, Title 36-106 (e) 5 (A). Information from these permits has been used to establish historical reference information on bull trout. Current and future permits are being used to provide data to enhance the recovery of bull trout. Furthermore, the Department has conducted surveys, studies, investigations, and scientific fact-finding activities for more than 40 years for the Idaho Fish and Game Commission (Commission), as authorized in <u>Idaho Code</u>, Title 36-104 (b) 1.

In response to recent evidence of declining bull trout populations, the Department identified several bull trout conservation measures. As a result, in 1994, the Commission adopted a conservation strategy to identify measures necessary to recover bull trout populations. The Commission's actions became the basis for the State of Idaho's Bull Trout Conservation Plan (State of Idaho 1996).

## Background

The Department's wildlife management philosophy and history is consistent with the purpose of the Endangered Species Act. The Department manages Idaho's wildlife under Commission guidance and authority from Title 36 Idaho Code. Title 36-103 states: "All wildlife . . . is hereby

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declared to be the property of the state of Idaho. It shall be preserved, protected, perpetuated, and managed."

Idaho Code, Title 36-104, authorizes the Commission and the Department, 36-106 to establish fishing regulations, conduct fish stocking, species introductions, research, and management activities. The Department does not directly manage habitat but is actively involved in land use management decisions by providing comments in the appropriate forums.

The Department's fisheries management philosophy emphasizes the protection and perpetuation of wild native fishes and habitat. In order to accomplish the Department's mission to protect fish and wildlife resources and to provide for their use by the public, a number of guiding principles have been developed. The priority to protect wild native fish species, as restated in the most recent 2001-2006 Fisheries Management Plan (IDFG 2001), has been in place since, at least 1975 (IDFG 1978). Fisheries Policies #3 and #9 of this plan state:

- 3. Wild native populations of resident and anadromous fish species will receive priority consideration in management decisions.
- 9. Non-native species of fish will be introduced only in waters where they are not expected to adversely impact stocks of wild native fish.

The Department's recognition of the value of native fishes and the importance of protecting historic gene pools is most clearly stated in policy # 8 of the 1996-2000 Fisheries Management Plan, which reads:

8. The Department will strive to maintain the genetic integrity of wild native stocks of fish (resident and anadromous) and naturally managed fish when using hatchery supplementation.

The Department is currently involved in several programs designed to remove brook trout or lake trout in waters where bull trout are present. This activity is experimental in nature to test efficacy of removal projects. Projects are ongoing in the Panhandle, Clearwater, Southwest, and Salmon regions.

Habitat degradation and genetic fragmentation have been documented as the primary cause of bull trout population decline (USDA Forest Service, 1994 draft; Rieman and McIntrye, 1993). The Service also recognized habitat as one of the four factors limiting bull trout recovery in its Federal Register notice (63 FR 31647). Authority for regulating and enforcing factors affecting fish habitat is vested in Idaho's Department of Environmental Quality, Department of Water Resources, Department of Lands, and the United States Army Corps of Engineers, Forest Service, Bureau of Land Management, and the Environmental Protection Agency. Through the Clean Water Act, protection and restoration of fish habitat and water quality have been top priorities in the fisheries management program.

Although, the Department has limited ability to manage habitat, it takes a pro-active role to assist land management agencies and private interests in habitat issues. As stated in the Department's 1990-2005 Policy Plan (IDFG, 1991): "The Department will oppose any activity that results in significant loss or degradation of habitat capable of supporting self-sustaining fish populations." In addition, habitat is addressed in the 1996-2000 Fisheries Management Plan policies #31 and #32, which are particularly relevant to bull trout because habitat degradation and genetic fragmentation are primary causes of bull trout population decline.

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- 31. The Department will actively support and participate in efforts to protect or enhance the quality of water in Idaho's lakes, rivers, and streams.
- 32. The Department will oppose legislation, land and water use activities, policies or programs that result in significant and unwarranted loss of fish and wildlife habitat or populations and will advocate project designs that minimize or eliminate such losses.

In response to declining bull trout populations, the Department exercised its authority to promulgate fishing rules to protect bull trout. Since 1994, harvest of bull trout has been illegal in all waters except Lake Pend Oreille and the Clark Fork River. In 1996, the Commission made it illegal to harvest bull trout in all waters of the State. The Department believes catch-and-release mortality on bull trout is minimal (approximately 5%, State of Idaho 1997), and poses no threat to the continued existence and recovery of bull trout at the population or Distinct Population Segment (DPS) level. The Department has also increased the daily bag limit on brook trout *Salvelinus fontinalis*, to encourage brook trout harvest, in an attempt to minimize interaction and interbreeding with bull trout. Impacts of recreational fisheries conducted under the Department's authority are addressed under Section 4 (d) of the Act (Federal Register Vol. 63 No. 111).

The Department has participated in several information and education initiatives, primarily to increase the public's awareness of bull trout status and biology, and to help anglers differentiate bull trout from other species. Specifically, the Department has contributed to development and dissemination of "Bull Trout Alert" posters, "Know Your Bull" posters, "Wanted, Anglers Who Can Identify Bull Trout" posters, bull trout identification stickers, metal signs (4' x 4') to inform anglers of bull trout in nearby waters, the American Fisheries Society "Bull Trout In Idaho-A Species in Peril" pamphlet, and the Columbia Basin Salmon Enforcement Team "Resident Fish Protection" flyer. These activities have been completed in cooperation with the U.S. Forest Service. Bureau of Land Management, U.S. Fish and Wildlife Service (Sport Fish Restoration), Bonneville Power Administration, and the American Fisheries Society. A major education effort was conducted in winter 1998 and spring 1999, followed by a second identification survey to evaluate the success of the program. This program was conducted statewide in 2000 using the signs, stickers, and posters mentioned above. The Boise River system is being targeted with an extensive identification survey to assess these education efforts. Additionally, two bull trout were hauled to the Morrisson-Knudsen Nature Center viewing pond in Boise to educate the public by having live fish to observe and identify.

# **Fishery Management Activities**

The evolution of the Department's management approach reflects its goal to preserve both resident and anadromous wild native fishes (IDFG 2001). Perhaps the best example of this commitment is the implementation of Department's programs that minimize the impacts of hatcheries and harvest on wild stocks.

The Department's fishery program consists of management, research, and hatchery sections. In the past, sampling of bull trout has occurred incidental to, or as the primary objective in all of these activities. In the future, however, all take of bull trout resulting from these activities will be considered purposeful because comprehensive data will be collected and reported from all bull trout captured and the information will be used to enhance bull trout recovery. All bull trout captured during these activities will be documented, enumerated, measured, released

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unharmed and reported. In addition, some fish may be marked/tagged for research purposes or non-lethal sampling for genetic analysis (fin-clipped) or age analysis (scale sampled). Bull trout mortalities resulting from any activity will be collected, appropriately sampled for disease, genetics, and age, and archived as directed by the Service. The numbers and type of take anticipated in the Department's **Bull Trout Conservation Program Plan** are identified in Table 1. The following definitions for types of take are provided for clarification:

- Observe, harass: this is done by snorkeling and enumeration of spawning redds. Snorkeling is typically done in mid-summer, although specific time frame varies with flows. To snorkel and observe fish, an investigator typically wears a wet suit, mask, and snorkel tube while crawling or swimming in an upstream direction identifying, counting, and estimating the size of fish observed within a measured reach of the stream. Redds are typically counted by one person per stream or specifically defined transect in a stream while walking on the stream bank or in the stream. Investigators are instructed to avoid live fish and to avoid walking in the streams as much as possible. Redd counts in traditional trend areas are typically done only once per year in the fall shortly after spawning is completed.
- 2. Capture, handle, and release: this involves the use of electrofishing, traps, weirs, nets, and hook-and-line sampling. Electrofishing is used mainly in management activities such as standard stream or lake surveys, or population estimates. Bull trout may be captured or otherwise affected by these routine activities. Electrofishing is conducted in accordance with the best available technology and methods. Impacts are minimized by using proper equipment and settings for the water conditions, by avoiding habitats likely to concentrate bull trout unless they are the target species, by curtailing electrofishing immediately when bull trout are not the target species, and by handling of all captured fish appropriately by experiences investigators. Other sampling involves trapping, netting, and handling fish to gather biological information about them. Lengths and weights of fish are normally collected from each game fish handled. Standard collection and handling techniques appropriate for the prescribed task are used. Fish are kept in water as much as possible during the sampling and handling. Weirs and traps are usually checked twice daily to minimize the time fish are detained. Gillnetting is another method used to gather biological information. Where we believe bull trout are not present, a typical gill net set is overnight in a lake or reservoir. In suspected bull trout waters, test gillnetting is done with an hour-long set to minimize the chance of bull trout mortalities. If no bull trout are captured then a gill net may be fished for a longer time period. In some areas, sampling with traditional angling gear may be the most efficient method. Hook-and-line sampling also requires the collection of biological information for all species captured.
- 3. Capture, handle, tag/mark, and release: same as No. 2, but includes tagging or marking the fish in any way. Tagging or marking may include a non-lethal fin clip for genetics sampling, placement of jaw tags, Passive Integrated Transponder (PIT) tags, Visual Implant (VI) tags, spaghetti or disc tags, or insertion of radio or sonic tags. Tags will be used appropriately with consideration of fish size and morphology, and applied according to standard protocols that are proven to be effective. Typically, the tagging involves the use of MS-222 as an anesthetic, although other methods will be used relative to needs and efficacy.

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Environmental conditions will be closely considered in our collection and tagging activities to minimize potential harm to bull trout.

- 4. Lethal take: authorized directed mortality for genetic, disease, or other sampling.
- 5. Indirect mortality: unintentional mortality associated with an authorized take, (1, 2, or 3 above).

Management programs typically consist of generalized activities such as creel and fish population surveys. In waters where bull trout may be present, the Department will regularly engage in a wide variety of activities to collect and report data on bull trout to enhance their chance of recovery. The Department will take appropriate actions to minimize potential impacts to bull trout such as non-lethal, small-scale sampling prior to large-scale sampling. This will include snorkeling, angling, electrofishing, and/or trial gillnetting. For standard lake sampling (overnight gillnetting, trap netting, and electrofishing), or just gillnetting a water body that has an unknown fish community, gill nets will be set for a short time (one hour) before an overnight set may be used. With this protocol, the potential for a large number of bull trout mortalities should be greatly reduced.

Resident fish research activities usually focus on specific questions. These activities are likely to be similar to management activities and the same mitigating actions will be taken.

Take of bull trout also occurs during the Department's anadromous research and hatchery activities such as: snorkeling, electrofishing, operating smolt traps and fish weirs, and during redd counts. These activities are described in detail in the Department's Section 10 permits through National Marine Fisheries Service (available upon request). Prior to 1999, all take of bull trout associated with these activities was considered incidental to the primary project objectives. Now the Department uses these opportunities to collect bull trout data and report those data to the Service to enhance recovery. Therefore, such take is considered purposeful.

Bull trout, mostly adults, may be captured at hatchery racks during routine trapping operations. Some of these fish may be used for research programs (e.g. radio tracking) in which case they may be marked/tagged. In any event, all bull trout captured will be enumerated, measured, and released on the appropriate side of the weir. Data collected will be reported to the Service to enhance recovery.

#### **Habitat Management Activities**

The Department's Fish Screen Program, headquartered in Salmon, Idaho, conducts numerous activities related to projects aimed at reducing losses of anadromous fish at stream diversions. Projects are located throughout the Salmon, Snake and Clearwater drainages in anadromous fish waters. Depending on funding, the project sites may be expanded into non-anadromous waters to reduce diversion losses for other migratory species such as bull trout and cutthroat trout *Oncorhynchus clarki*. These projects which include installing or modifying screens on divisions, consolidating and eliminating diversions, modifying diversion dams and intake structures can potentially have some small immeasurable impacts and take on bull trout during construction. However the benefits of these projects in the prevention of losses into diversions far out way any potential take. Further, these activities are performed using proper approved construction procedures to reduce sedimentation and fish disturbances. Types and locations of these projects will be included in the report. Research activities dealing with specific fish

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associated with evaluations of screen shop projects will be included in the appropriate Regional report.

# **Department Personnel**

As mentioned above, most if not all, of these projects and tasks are shared by research, hatchery and management personnel from the Department. Information provided herein reflects a broad approach to the anticipated involvement of individuals, agencies, and sponsors over the life of the permit.

A list of the Department's professional fisheries workers doing work that may affect bull trout will be provided to the Service upon request. Only qualified personnel will be authorized to handle bull trout.

# **Department Agents**

The Department is authorized under 50 CFR 17.31 (b) to designate agents for implementing recovery-related actions. In designating agents, the Department retains full responsibility for all take incurred by these agents. Occasionally other agencies or private consultants request to conduct studies as agents under our permit. Under the Department's current permitting process, we review the applicant's qualifications and purpose prior to approval. Only qualified personnel will be authorized to handle bull trout. We ensure that agents meet the mandates of the ESA by placing specific requirements on those agents. We require agents to provide us with an annual report and notify the Department immediately if the conditions of their permit are exceeded, or if any lethal take has occurred. The Department will notify the Service by way of amendments to the Plan when agents are added or deleted.

In 2000, we issued 68 permits designating agents with 47 doing work in bull trout waters. In bull trout waters, this was a decrease of two permits from 1999. In 2001, we anticipate a similar number of permits. Most agents do not take bull trout at all, but coverage is given to promote reporting of any take and to ensure coverage for cooperators.

**AGENTS:** (include representatives of the following organizations)

U.S. Fish and Wildlife Service

U.S. Geological Survey

U.S. Bureau of Land Management

U.S. Forest Service

U.S. Bureau of Reclamation

U.S. Environmental Protection Agency

National Marine Fisheries Service

Idaho Department of Environmental Quality

Idaho Department of Lands

Idaho Power Company

University of Idaho

University of Montana

Boise State University

Potlatch Corporation

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Avista Corporation
Oregon Department of Fish and Wildlife
and approved private consulting firms.

# Reporting Requirements

The Department will provide the Service an annual report documenting bull trout take and the activities conducted under the approved **Bull Trout Conservation Program Plan**. The report will summarize all activities completed by Department personnel and its agents. The Department's report for 2000 is included in Section 2 of this report.

The **Bull Trout Conservation Program Plan** may be amended at any time throughout the year, upon notification to the Service. The Department and Service will meet annually to review, update and approve the **Bull Trout Conservation Program Plan**.

By March 31, 2001 the Department will provide the Service an anticipated work plan for the upcoming field season that outlines the anticipated take on bull trout for all Department activities, including activities of agents.

# **Conclusions**

We believe none of the Department's current fisheries programs pose a threat to the continued existence or future recovery of bull trout. Actions authorized will promote bull trout conservation by providing both the state and the USFWS with better information to determine both threats and recovery actions. In the Federal Register notice vol. 63, No. 111, the Service did not identify scientific collection as a limiting factor in the recovery of bull trout. Habitat degradation has been identified as the primary cause for decline and the limiting factor for bull trout recovery. Although the Department has limited ability to manage habitat, we will continue our commitment to actively support and participate in efforts to protect or enhance habitat. At the same time, we will ensure that our management, research, hatchery, and permitting programs are consistent with the purposes of the Act. Through this plan, the Department seeks to comply with ESA by providing primary leadership in implementing bull trout recovery actions in Idaho.

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- USDA Forest Service. 1994 (draft). An assessment for the conservation needs for bull trout. (Compiled by R. Stowell, P. Howell, B. Rieman, and J. McIntrye).

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Table 1. Anticipated take of bull trout in Idaho in 2001, by IDFG administrative region.

Administrative region.	Observed < 300 mm	Observed > 300 mm	Cap/handle/ release < 300 mm	Cap/handle/ elease ≥ 300 mm	Cap/han/tag/ mark/rel < 300 mm	Cap/han/tag/ mark/rel > 300 mm	Indirect mortality < 300 mm	Indirect mortality ≥ 300 mm	Total < 300 mm	Total ≥ 300 mm
Panhandle	50	50	50	50	50	500	15	10	165	610
Clearwater	60	50	150	200	100	100	10	10	320	360
Southwest - McCall	100	50	150	10	750	500	10	10	1010	570
Southwest - Nampa	150	50	100	10	500	200	10	5	760	265
Magic Valley	5	5	5	5	15	15	2	5	27	30
Upper Snake	10	1	300	30	300	30	10	1	620	62
Salmon	75	100	500	50	100	10	5	5	680	165
Totals	450	306	1,255	355	1,815	1,355	62	46	3,582	2,062
								Total non-mo	-	5,536 108
								Grand Total		5,644

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#### Section 2 – The Report

A summary of the Department's take activities (including agents who have received Scientific Collecting Permits) of bull trout in 2000 is included in the following tables. These numbers are a compilation of the real numbers of bull trout taken within an administrative region of the Department. Information on all known bull trout take within the state is included in this format and will be reported each year hereafter by March 31.

In 2000, while carrying out the Commission's mission to preserve, protect, perpetuate, and manage all wildlife, Department personnel and agents sampled bull trout in six of the eight administrative regions and 10 of the 11 drainages where bull trout have historic distribution.

Most agents did not take bull trout while doing scientific collecting activities. The Department designated 68 agents in 2000, 47 worked in waters that historically had bull trout, and 22 of those took bull trout.

This report includes the number of projects, the number and names of waters, a list of Department personnel and agents whom reported take, and the different techniques used to sample for bull trout. During 2000, Department personnel and agents reported handling 4,415 bull trout (Table 1). Of these 4,388 (99.4%) were released alive and 27 (0.6%) were reported as indirect mortalities. Regional reports (Tables 2 to 8) are separated into two subsections consisting of 1) agents permitted by the IDFG and designated by a permit number beginning with a "F", and 2) IDFG management ("M"), research ("R"), and hatchery ("H") activities. Known, unpermitted illegal harvest, and unintended incidental take (catch-and-release) by anglers fishing for other species are also included for informative purposes (Table 9). Unauthorized take reported by enforcement personnel are noted by an "E" code in the reference number and covered incidents, warnings and citations. In other cases recorded by non-enforcement personnel, take was recorded as "unpermitted". In most cases of illegal harvest and incidental catch and release, sizes of bull trout taken were not known. These sizes were placed into the most likely size groups. Of note in the reporting process is the use of 300 mm as the separation value of juvenile and adult bull trout. Indeed, many of the fish <300 mm are mature bull trout in small streams. Since size at maturity is variable by life history characteristics, and productivity of the systems the bull trout evolved in, investigators need to view these data with caution when determining adult and juvenile status. Habitat modification projects conducted by the screen shop are summarized in Table 10.

A narrative and an associated table of take are included for each administrative region of the Department where bull trout were taken. No bull trout exist in the Southeast Region.

#### Panhandle Region:

Avista Corporation, USFS, and Department personnel (management, research, and hatcheries) contributed information to this take report (Table 2). Department personnel handled 55 bull trout with 1 indirect mortality and agents handled 585 bull trout with 1 indirect mortality for a total of 638 bull trout handled and released and 2 indirect mortalities. Bull trout were found in 20 lakes, rivers and streams in the Spokane, Pend Oreille, and Kootenai river drainages. Hatchery personnel at Clark Fork Hatchery and Granite Creek handled bull trout at trapping and weiring sites. Most other streams were either snorkeled or electrofished to estimate relative fish

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abundance or walked to observe redds built by spawning bull trout. In the Kootenai River and Priest Lake, bull trout were sampled by setline, electrofishing and netting.

### Clearwater Region:

USFS, IDEQ, and Department personnel (management, research, and hatchery projects) contributed information to this take report (Table 3). Department personnel handled 274 bull trout with 9 indirect mortalities and agents handled 108 bull trout with no indirect mortality for a total of 373 bull trout handled and released and 9 indirect mortalities. Bull trout were sampled in Sheep, John Day and E. F. John Day, and Williams creeks and in the S.F. Red and W.F. Crooked rivers by electrofishing. Screw traps or weirs and traps were operated in American River, Clear Creek, Colt Killed Creek, Crooked Fork Creek, Crooked River, Indian Creek, Snake River, Walton Creek and Red River, to capture anadromous fish and bull trout. Seines and gill nets were used in the Snake and N. F. Clearwater rivers. The Snake and N.F. Clearwater rivers were angled to collect bull trout. Snorkeling was the method of take for bull trout in 11 waters. A total of 103 bull trout were reported to be caught and released by anglers during fall steelhead creels surveys along the Salmon River (Table 9). Creel clerks at Fish Lake and officers along the N.F and S.F. Clearwater rivers reported 12 bull trout mortalities from unauthorized harvest. Three bull trout captured at the Hells Canyon Chinook salmon trap and held at Oxbow Hatchery died when equipment malfunctioned. This equipment has been repaired to prevent future problems.

## Southwest Region:

Idaho Power Company, USFS, BOR, NMFS, University of Idaho, and Department fisheries management, research, and hatchery personnel took bull trout in 43 waters in the Southwest Region. In the northern portion of the region (McCall), Department personnel handled 463 bull trout with no indirect mortalities and agents handled 826 bull trout with no indirect mortality for a total of 1.289 bull trout handled and released with no indirect mortalities (Table 4). While doing anadromous fisheries work in the Salmon River drainage, Department management personnel snorkeled, electrofished, trapped, or observed (redd counts) bull trout to provide information to recovery the species. A short term gill net was set in Rice Lake to verify the presence of bull trout. In the southern portion of the region (Nampa), Department personnel handled 61 bull trout with no indirect mortalities and agents handled 826 bull trout with no indirect mortality for a total of 834 bull trout handled and released with no indirect mortalities (Table 5). Intensive electrofishing on 13 waters in the Boise River drainage provided additional distribution information. A ladder for fish passage, which was installed at Atlanta Dam in 1998-1999, continued to show use by bull trout. The Bureau of Reclamation conducted an intensive trapping survey on the North Fork Boise River and sampled 426 bull trout. Enforcement actions were taken on anglers harvesting three bull trout from the Salmon and Little Salmon rivers (Table 9).

## Magic Valley Region:

USFS, and Department management and enforcement personnel contributed information to this take report (Table 7). USFS sampling efforts, which were limited to South Fork Boise River tributaries where bull trout were not found in recent years, failed to find bull trout in 2000. Magic Valley regional personnel did not conduct stream surveys in bull trout waters during 2000. Enforcement and research personnel requested anglers release three bull trout caught in the South Fork Boise River (Table 9). Management personnel completed modifications to the Feather River road culvert to improve passage for bull trout

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# Upper Snake Region:

Bull trout are only found in this region in the Little Lost River drainage. USFS personnel contributed information to this take report (Table 7). In the seven streams where bull trout were found, only three fish  $\geq$ 300 mm were found of the 531 bull trout sampled. This is an obvious indication that many of these fish mature at a smaller size than migratory stocks that can reach much lower elevations or move to larger, warmer environments.

#### Salmon Region:

USFS, NMFS, IDEQ, and Department personnel from management, research, hatchery and screen shop programs contributed information to this take report (Table 8). Bull trout were observed, electrofished, trapped, or netted in Pettit and Redfish lakes, plus 42 rivers and streams in 2000 in the Salmon Region. Department personnel handled 666 bull trout with 15 indirect mortalities and agents handled 12 bull trout with no indirect mortality for a total of 663 bull trout handled and released and 15 indirect mortalities. Mortalities were associated with traps. Much of the take by Department fisheries employees was in association with sampling for Endangered sockeye salmon *Oncorhynchus nerka* or Threatened chinook salmon *O. tshawytscha*. This information is being used to help in the recovery of all three listed species. Creel surveys in Alturas and Redfish lakes found anglers reporting catching and releasing 33 bull trout (Table 9). Creel clerks and officers documented the illegal harvest of four bull trout from Alturas and Redfish lakes. The Salmon screen shop did only limited evaluation of fish movement in their bypass facilities during 2000 and observed five bull trout in Big Springs Creek. They plan to expand their research in future years to determine effectiveness of preventing fish loss in diversions.

# Screen Shop:

The screen shop treated 81 sites during 2000, (Table 10). Most instream work conducted by the screen shop during 2000 was installing passive screens on pumps. Work was primarily in Little Salmon River, upper Salmon River and Middle Fork of the Clearwater River.

A list of all people that provided information for this take report is found in Table 11.

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Table 1. Summary of bull trout take in Idaho in 2000, by IDFG administrative region. Cap/handle/ Cap/handle/ Cap/han/tag/ Cap/han/tag/ Indirect Indirect Total Total Administrative Observed Observed release mark/rel mark/rel mortality mortality < 300 <u>≥</u> 300 release < 300 mm > 300 mm region. < 300 mm ≥ 300 mm < 300 mm ≥ 300 mm < 300 mm <u>></u> 300 mm mm mm Panhandle Clearwater Southwest - McCall Southwest - Nampa Magic Valley Upper Snake Salmon Totals Total non-mortality 4,388 Total mortality **Grand Total** 4,415

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Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed < 300 mm	Observed <u>&gt;</u> 300 mm	Cap/handle/ release < 300 mm	Cap/handle/ release > 300 mm	Cap/han/tag/ mark/rel < 300 mm	Cap/han/tag/ mark/rel ≥ 300 mm	Indirect mortality < 300 mm	Indirect mortality ≥ 300 mm
F-05-00,							_				_
F-70-92	Clark Fork River	Panhandle	Electrofishing				2				
F-15-99	Clark Fork River - CHL	Panhandle	Weir				26		41		
F-63-92	East Fork Lighting Creek	Panhandle	Snorkel\Net						56		
F-63-92	Grouse Creek	Panhandle	Snorkel\Net						91		
F-03-99	Lake Pend Oreille	Panhandle	Electrofishing				8		0.		
	Pack River	Panhandle	Snorkel\Net						1		
		Pannandie	Shorkeriner						1		
	Priest Lake, Upper	Dankandla	Cill and Edge not								
	and Thorofare South Gold Creek	Panhandle	Gill and Fyke net Snorkel\Net						9 36		
		Panhandle							30		
	St. Joe River	Panhandle	Electrofishing			2			202		
	Trestle Creek	Panhandle	Snorkel\Net	25	4.4				263		
F-07-99	West Gold Creek Subtotal	Panhandle	Snorkel	35 35		2	36	0	497	0	
	Subiolai			33	14		30	0	497	U	
R-VP-00	Boulder Creek	Panhandle	Drift net			1					
		Panhandle	Snorkel	1		<u> </u>					
	Boulder Creek			1		1					
	Curley Creek	Panhandle	Electrofishing		2	<u>'</u>					
	Gold Creek	Panhandle	Redd count		2	1					
	Granite Creek	Panhandle	Seine			<u> </u>					
	Kootenai River	Panhandle	Setline				1				
	Kootenai River	Panhandle	Hoop net			1	5		2		
	Kootenai River	Panhandle	Electrofishing			4.4	5		2		
	Medicine Creek	Panhandle	Electrofishing		4	11					
	Medicine Creek	Panhandle	Snorkel		4						
	North Gold Creek	Panhandle	Redd count		4						
	Priest River, Upper	Panhandle	Snorkel		5						
	St. Joe River	Panhandle	Electrofishing			1					
M-NH-00	St. Joe River	Panhandle	Snorkel	1							
M-NH-00	Wisdom Creek	Panhandle	Electrofishing	_		6				_	
	Subtotal			2	15	22	11	0	4	0	
	TOTAL 0									_	
	TOTALS			37	29	24	47	0	501	0	1

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Number	Fork of John Day k n Creek Day Creek sa River	IDFG Admin Region  Clearwater  Clearwater  Clearwater	Sampling Method Screw trap Electrofishing	Observed < 300 mm	Observed	Cap/handle/ release	Cap/handle/ release	Cap/han/tag/ mark/rel	Cap/han/tag/ mark/rel	Indirect mortality	Indirect
Number	r Creek Fork of John Day k n Creek Day Creek sa River	Clearwater	Screw trap	< 300 mm	> 300 mm		release	mark/rei			
F-02-90 Clear Cre	Fork of John Day k n Creek Day Creek sa River	Clearwater					> 300 mm	< 300 mm	> 300 mm	< 300 mm	mortality > 300 mm
East Fork F-51-90 Creek F-09-93, F-22-92 Indian Cre F-51-90 John Day F-17-00 Lochsa Ri F-09-93, F-22-92 Sheep Cre F-02-90 Snake Riv F-09-93, F-22-92 Snake Riv F-86-94 South For F-86-94 West Fork F-86-94 West Fork F-86-94 Williams ( Subtot  R-JB-00 American R-JB-00 Bargamin R-JB-00 Big Mallar R-JB-00 Colt Killed Colt Killed Colt Killed Colt Killed R-JB-00 Crooked F	Fork of John Day k n Creek Day Creek sa River	Clearwater				< 300 mm	> 300 mm	< 300 11111	> 300 11111	< 300 11111	> 300 11111
F-51-90 Creek F-09-93, F-22-92 Indian Cre F-51-90 John Day F-17-00 Lochsa Ri F-09-93, F-22-92 Sheep Cre F-02-90 Snake Riv F-09-93, F-22-92 Snake Riv F-08-94 West Fork F-86-94 West Fork F-86-94 Williams Content of the second of	k n Creek Day Creek sa River		Electrofishing			Т					
F-22-92 Indian Cre F-51-90 John Day F-17-00 Lochsa Ri F-09-93, F-22-92 Sheep Cre F-02-90 Snake Riv F-09-93, F-22-92 Snake Riv F-86-94 South For F-86-94 West Fork F-26-84 Williams Count Subtot  R-JB-00 American R-JB-00 Bargamin R-JB-00 Big Mallar R-JB-00 Colt Killec R-JB-00 Crooked F H-JB-00 Crooked F H-JB-00 Crooked F R-JB-00 Rore Cre M-DS-00 Drainage North Forl M-DS-00 Drainage R-JB-00 Red River R-JB-00 Red River R-JB-00 Slate Cree R-JB-00 Snake Riv South For	Day Creek sa River	Clearwater				13					
F-17-00 Lochsa Ri F-09-93, F-22-92 Sheep Cre F-02-90 Snake Riv F-09-93, F-22-92 Snake Riv F-86-94 South For F-86-94 West Fork F-26-84 Williams ( Subtot  R-JB-00 American R-JB-00 Bargamin R-JB-00 Big Mallar R-JB-00 Colt Killed Colt Kil	sa River		Weir								
F-09-93, F-22-92 Sheep Cro F-02-90 Snake Riv F-09-93, F-22-92 Snake Riv F-86-94 South For F-86-94 West Fork F-26-84 Williams C Subtot  R-JB-00 American R-JB-00 Bargamin R-JB-00 Big Mallar R-JB-00 Colt Killec Colt Killec (White Sa R-BL-00 Crooked F R-JB-00 Crooked F		Clearwater	Electrofishing			9					
F-22-92 Sheep Cro F-02-90 Snake Riv F-09-93, F-22-92 Snake Riv F-86-94 South For F-86-94 West Fork F-26-84 Williams ( Subtot  R-JB-00 American R-JB-00 Bargamin R-JB-00 Big Mallar R-JB-00 Colt Killed Colt Killed (White Sa R-BL-00 Crooked F R-JB-00	p Creek	Clearwater	Snorkel		9						
F-02-90 Snake Riv F-09-93, F-22-92 Snake Riv F-86-94 South For F-86-94 West Fork F-26-84 Williams ( Subtot  R-JB-00 American R-JB-00 Bargamin R-JB-00 Big Mallar R-JB-00 Colt Killed Colt	p Creek										
F-09-93, F-22-92 Snake Riv F-86-94 South For F-86-94 West Fork F-26-84 Williams ( Subtot  R-JB-00 American R-JB-00 Bargamin R-JB-00 Big Mallar R-JB-00 Colt Killed Colt Killed Colt Killed Cott Killed		Clearwater	Electrofishing			1					
F-22-92 Snake Riv F-86-94 South For F-86-94 West Fork F-26-84 Williams ( Subtot  R-JB-00 American R-JB-00 Bargamin R-JB-00 Big Mallar R-JB-00 Colt Killed Colt Killed (White Sa R-BL-00 Crooked F R-JB-00 Crooked F R-JB-00 Crooked F R-JB-00 Crooked F R-JB-00 Drainage R-JB-00 Drainage R-JB-00 Drainage R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv South For	e River	Clearwater	Seine			1					
F-86-94 South For F-86-94 West Fork F-26-84 Williams (Subtot Subtot Subt			L								
F-86-94 West Fork F-26-84 Williams ( Subtot  R-JB-00 American R-JB-00 Bargamin R-JB-00 Big Mallar R-BL-00 Colt Killed Colt Killed (White Sa R-BL-00 Crooked F R-JB-00 Crooked F R-JB-00 Crooked F R-JB-00 Drainage North Forl M-DS-00 Drainage R-JB-00 Red River R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv		Clearwater	Rod, Trap					2	8		
F-26-84 Williams ( Subtot  R-JB-00 American R-JB-00 Bargamin R-JB-00 Big Mallar R-BL-00 Colt Killec Colt Killec (White Sa R-BL-00 Crooked F H-JB-00 Crooked F R-JB-00 Crooked F R-JB-00 Drainage North Forl M-DS-00 Drainage R-JB-00 Red River R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv	n Fork Red River	Clearwater	Electrofishing			2					
R-JB-00 American R-JB-00 American R-JB-00 Bargamin R-JB-00 Big Mallar R-BL-00 Colt Killec	Fork Crooked River	Clearwater	Electrofishing			52					
R-JB-00 American R-JB-00 American R-JB-00 Bargamin R-JB-00 Big Mallar R-BL-00 Colt Killec		Clearwater	Electrofishing			6					
R-JB-00 American R-JB-00 Bargamin R-JB-00 Big Mallar R-BL-00 Colt Killec Colt Killec (White Sa R-BL-00 Crooked F R-JB-00 Crooked F R-JB-00 Crooked F R-JB-00 Drainage North Forl M-DS-00 Drainage R-JB-00 Red River R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv	ubtotal			0	9	85	4	2	8	0	
R-JB-00 American R-JB-00 Bargamin R-JB-00 Big Mallar R-BL-00 Colt Killec Colt Killec (White Sa R-BL-00 Crooked F R-JB-00 Crooked F R-JB-00 Crooked F R-JB-00 Drainage North Forl M-DS-00 Drainage R-JB-00 Red River R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv	rican Divar	Cleamyatan	Cmarkal	1	2						
R-JB-00 Bargamin R-JB-00 Big Mallar R-BL-00 Colt Killec Colt Killec (White Sa R-BL-00 Crooked F H-JB-00 Crooked F R-JB-00 Crooked F R-JB-00 Drainage North Forl M-DS-00 Drainage R-JB-00 Red River R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv		Clearwater	Snorkel		2		0	6		0	
R-JB-00 Big Mallar R-BL-00 Colt Killec Colt Killec (White Sa R-BL-00 Crooked F H-JB-00 Crooked F R-JB-00 Crooked F R-JB-00 Drainage North For M-DS-00 Drainage R-JB-00 Red River R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv		Clearwater	Rotary Trap	0			0	6	2	0	
R-BL-00 Colt Killed Colt Killed Colt Killed (White Sa R-BL-00 Crooked F H-JB-00 Crooked F R-JB-00 Crooked F R-JB-00 Moore Cro M-DS-00 Drainage North Forl M-DS-00 Drainage R-JB-00 Ohara Cro R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv		Clearwater	Snorkel	2							
Colt Killed R-JB-00 (White Sa R-BL-00 Crooked F H-JB-00 Crooked F R-JB-00 Crooked F R-JB-00 Moore Cro North For M-DS-00 Drainage North For M-DS-00 Drainage R-JB-00 Red River R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv		Clearwater	Snorkel	0	1	10					
R-JB-00 (White Sa R-BL-00 Crooked F H-JB-00 Crooked F R-JB-00 Crooked F R-JB-00 Moore Cro North Forl M-DS-00 Drainage North Forl M-DS-00 Drainage R-JB-00 Aged River R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv		Clearwater	Screw trap			10		4			
R-BL-00 Crooked F H-JB-00 Crooked F R-JB-00 Crooked F R-JB-00 Crooked F R-JB-00 Moore Cro M-DS-00 Drainage North For M-DS-00 Drainage R-JB-00 Ohara Cro R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv South For	killed Creek e Sand Creek)	Clearwater	Snorkel	0	1						
H-JB-00 Crooked F R-JB-00 Crooked F R-JB-00 Crooked F R-JB-00 Moore Cre North Forl M-DS-00 Drainage North Forl M-DS-00 Drainage R-JB-00 Ohara Cre R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv South For	ked Fork Creek	Clearwater	Screw trap			17					
R-JB-00 Crooked F R-JB-00 Crooked F R-JB-00 Moore Cre North Forl M-DS-00 Drainage North Forl M-DS-00 Drainage R-JB-00 Ohara Cre R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv South For		Clearwater	Weir	0	0			0	19	0	
R-JB-00 Crooked F R-JB-00 Moore Cre North Forl M-DS-00 Drainage North Forl M-DS-00 Drainage R-JB-00 Ohara Cre R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv South For		Clearwater	Snorkel	13					13	0	
R-JB-00 Moore Cre North Forl M-DS-00 Drainage North Forl M-DS-00 Drainage R-JB-00 Ohara Cre R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv South For		Clearwater	Scoop Trap	13				8			
M-DS-00 Drainage North Forl M-DS-00 Drainage R-JB-00 Ohara Cre R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv South For			· · · · · · · · · · · · · · · · · · ·	16	0			0			
M-DS-00 Drainage North Forl M-DS-00 Drainage R-JB-00 Ohara Cre R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv South For		Clearwater	Snorkel	16	U						
North Fori M-DS-00 Drainage R-JB-00 Ohara Cre R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv South For		Clearwater	Cill not					20		1	
M-DS-00 Drainage R-JB-00 Ohara Cre R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv South For	age Fork Clearwater	Clearwater	Gill net					38	3	1	
R-JB-00 Ohara Cre R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv South For		Clearwater	Angling			1		14	50		
R-JB-00 Red River R-JB-00 Slate Cree H-KH-00 Snake Riv South For		Clearwater	Snorkel	1	0			14	50	-	
R-JB-00 Slate Cree H-KH-00 Snake Riv South For		Clearwater	Rotary Trap	0			0	17	5	1	
H-KH-00 Snake Riv South For		Clearwater	Snorkel	0				17	3	- '	
South For		Clearwater	Trap								
	n Fork Clearwater	Cidal Water	ιταρ								
		Clearwater	Snorkel	13	7						
R-JB-00 Ten Mile (		Clearwater	Snorkel	2							
H-BG-00 Walton Cr	Mile Creek	Clearwater	Trap	_		3					
Subtot	Mile Creek	7 - 7		48	20			87	79	2	
345.01	Mile Creek on Creek					<u> </u>		<u> </u>	. 0		
TOTALS	Mile Creek on Creek			48	29	116	4	89	87	2	

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Table 4	. Bull trout tak	e for the S	Southwest (Mo	cCall) I	Region,	2000.					
Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed < 300 mm		Cap/handle/ release < 300 mm	Cap/handle/ release ≥ 300 mm	Cap/han/tag/ mark/rel < 300 mm	Cap/han/tag/ mark/rel ≥ 300 mm	Indirect mortality < 300 mm	Indirect mortality ≥ 300 mm
F-51-90	Anderson Creek	McCall	Electrofishing			31		162	2		
F-51-90	Dewey Creek	McCall	Electrofishing			5		11			
	East Fork South Fork Salmon River	McCall	Electrofishing, angling					64	116		
F-01-91	Hornet Creek	McCall	Electrofishing			5					
F-07-00	Johnson Creek	McCall	Electrofishing, angling						9		
	Lake Fork of Rapid River	McCall	Electrofishing			12		145			
	Nethker Creek	McCall	Electrofishing			3		140	<b>'</b>		
	North Creek	McCall	Electrofishing			6					
	Placer Creek	McCall	Electrofishing			6					
	Rapid River	McCall	Electrofishing			9		153			
F-31-88	Secesh River	McCall	Electrofishing			s 15		155	)		
	South Fork Salmon		J								
	River	McCall	Electrofishing			3					
F-07-00	Sugar Creek	McCall	Electrofishing, angling					1			
F-13-99	Three Mile Creek	McCall	Electrofishing			7					
	Trapper Creek	McCall	Electrofishing, angling					1			
	Trapper Creek	McCall	Electrofishing			6		45			
F-13-99	Willow Creek	McCall	Electrofishing			1					
	Subtotal			0	0	119	С	582	125	C	
R-KA-00	Big Creek	McCall	Snorkel	1	1						
R-KA-00	Boulder Creek	McCall	Snorkel	44	4						
	East Fork South Fork Salmon River	McCall	Snorkel	8	6						
R-KA-00	Johnson Creek	McCall	Snorkel	2	-						
	Lick Creek	McCall	Snorkel	2							
	Little Salmon River	McCall	Snorkel	3							
R-KA-00	Rapid River	McCall	Snorkel	36	8						
	Rapid River Hatchery Trap	McCall	Trap						300		
	Rice Lake	McCall	Gill net			2	1		000		
	South Fork Salmon		J 1100								
R-KA-00	River	McCall	Screw trap			1		33	3		
R-KA-00	South Fork Salmon River	McCall	Snorkel	2	5						
R-KA-00 R-KA-00		McCall	Snorkel	3	-						
N-NA-00	West Fork Rapid River Subtotal	IVICCAII	SHUIKEI	101		3	1	33	300	C	
	Subioiai			101	25		1	33	300		
	TOTALS			101	25	122	1	615	425	C	

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Table 5. Bull trout take for the Southwest (Nampa) Region, 2000.

Body of Water	IDFG Admin Region	Sampling Method		Observed > 300 mm	Cap/handle/ release < 300 mm	Cap/handle/ release > 300 mm	Cap/han/tag/ mark/rel < 300 mm	Cap/han/tag/ mark/rel > 300 mm	Indirect mortality < 300 mm	Indirect mortality > 300 mm
Gabes Creek	Southwest	Snorkel	87							
Third Fork Squaw Creek	Southwest	Snorkel	26							
			20		18		12	1		
Ballentyne Creek	Southwest	Electrofishing			18		15			
Bear Creek Bear River	Southwest	Electrofishing					15			
=	Southwest	Electrofishing			3					
Big Silver Creek	Southwest	Electrofishing			Ь		6			
Crooked River	Southwest	Screw trap					56			
Crooked River	Southwest	Electrofishing			26		33			
Cub Creek	Southwest	Electrofishing					5			
Johnson Creek	Southwest	Electrofishing			4		4			
Lodgepole Creek	Southwest	Electrofishing			11		26			
Lucky Peak Reservoir	Southwest	Gill net						26		
North Fork Boise River	Southwest	Weir					282			
Rattlesnake Creek	Southwest	Electrofishing		2			23			
Subtotal			113	2	68	0	480	171	0	(
Decker Creek	Southwest	Electrofishing				1				
Decker Creek	Southwest	Snorkel		1						
Grouse Creek	Southwest	Electrofishing			2					
Grouse Creek	Southwest	Snorkel	2							
Middle Fork Boise River, Kirby Dam	Southwest	Trap			8		1			
Middle Fork Boise River, Kirby Dam	Southwest	Snorkel	3	15						
North Fork Boise River	Southwest	Snorkel	13	11						
Sawmill Creek	Southwest	Snorkel	2							
Yuba River	Southwest	Electrofishing			1					
Yuba River	Southwest	Snorkel	1							
Subtotal			21	27	11	1	1	0	0	
TOTALS			134	29	79	1	481	171	0	1
Subtotal		Southwest	Southwest Shorker	21	21 27	21 27 11	21 27 11 1	21 27 11 1 1	21 27 11 1 1 0	21 27 11 1 1 0 0

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Table 6	. Bull trout	take for t	he Magic	Valley	Region,	2000.					
Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method		Observed ≥ 300 mm		Cap/handle/ release > 300 mm	Cap/han/tag/m ark/rel < 300 mm	Cap/han/tag/m ark/rel <u>&gt;</u> 300 mm	Indirect mortality < 300 mm	Indirect mortality > 300 mm
Sampling ac	tivity in 2000 did	not find bull tr	out.								
	TOTALS			0	0	0	0	0	0	0	0

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Table 7	. Bull trout ta	ake for the	Upper Sn	ake Reg	gion, 20	00.					
Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed < 300 mm	Observed > 300 mm	rologeo	Cap/handle/ release > 300 mm	Cap/han/tag/ mark/rel < 300 mm	Cap/han/tag/ mark/rel > 300 mm	mortality	Indirect mortality > 300 mm
F-05-95	Bear Creek	Upper Snake	Electrofishing			1					
F-05-95	Iron Creek	Upper Snake	Electrofishing			41					
F-05-95	Little Lost River	Upper Snake	Electrofishing			9	3				
F-51-90	Little Lost River	Upper Snake	Electrofishing			33		92			
F-05-95	Sawmill Creek	Upper Snake	Electrofishing			1					
F-05-95	Smithie Fork	Upper Snake	Electrofishing			116					
F-51-90	Smithie Fork	Upper Snake	Electrofishing			18		57			
F-05-95	Timber Creek	Upper Snake	Electrofishing			35					
F-51-90	Timber Creek	Upper Snake	Electrofishing			11		107		1	
F-05-95	Williams Creek	Upper Snake	Electrofishing			6					
	TOTALS			0	0	271	3	256	0	1	0

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Table 8. Bull trout take for the Salmon Region, 2000.

Collecting Permit Number	Body of Water	IDFG Admin Region	Method	Observed < 300 mm	Observed > 300 mm	Cap/handle/ release < 300 mm	Cap/handle/ release > 300 mm	Cap/han/tag/ mark/rel < 300 mm	Cap/han/tag/ mark/rel > 300 mm	Indirect mortality < 300 mm	Indirect mortality > 300 mm
F-31-88	Bear Valley Creek		Electrofishing			1					
F-31-88	Elk Creek		Electrofishing			1					
F-04-96	Jordan Creek	Salmon	Electrofishing			3					
F-11-96	Papoose Creek	Salmon	Electrofishing			1					
F-11-96	Ship Island Creek	Salmon	Electrofishing			1					
F-11-96	Wilson Creek	Salmon	Electrofishing			1					
F-04-96	Yankee Fork	Salmon	Snorkel	3							
	Subtotal			3	1	8	0	C	0	0	(
D 111 00	Alais a Oas al	0-1	D. H. L.		00						
R-LH-00	Alpine Creek		Redd count		23						
M-ML-00	Alturas Lake Creek		Weir	2	5						
M-ML-00	Bear Valley Creek	Salmon	Snorkel	22	24						
SC-PM-00	Big Springs Creek		Trap			5					
M-ML-00	Bohannon Creek		Electrofishing			17					
M-ML-00	Bray Creek		Electrofishing	_		12					
M-ML-00	Camas Creek		Snorkel	2	1						
M-ML-00	Canyon Creek		Electrofishing			143					
M-ML-00	Capehorn Creek		Snorkel	1							
M-ML-00	Challis Creek		Electrofishing			7					
M-ML-00	Cooper Creek		Electrofishing			16					
M-ML-00	East Fork Valley Creek		Electrofishing			1					
M-ML-00	Eighteenmile Creek		Electrofishing			41					
R-LH-00	Fish Hook Creek	Salmon	Redd count		18						
M-ML-00	Geertson Creek		Electrofishing			15	12				
M-ML-00	Hayden Creek	Salmon	Snorkel	14	2						
M-ML-00	Hayden Creek	Salmon	Electrofishing			18					
M-ML-00	Horse Creek	Salmon	Electrofishing			30					
M-ML-00	Kenney Creek		Electrofishing			2					
R-BL-00	Knapp Creek	Salmon	Snorkel	1							
M-ML-00	Lemhi Creek	Salmon	Electrofishing			2					
M-ML-00	Loon Creek	Salmon	Snorkel		1						
M-ML-00	Marsh Creek	Salmon	Snorkel	1							
R-BL-00	Marsh Creek	Salmon	Screw trap				1	1			
M-ML-00	Moccasin Creek	Salmon	Electrofishing				1				
M-ML-00	Morgan Creek	Salmon	Snorkel	1	2						
M-ML-00	North Fork Salmon River	Salmon	Snorkel	4							

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Table 8. Continued.

Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed < 300 mm	Observed > 300 mm	Cap/handle/ release < 300 mm	Cap/handle/ release > 300 mm	Cap/han/tag/ mark/rel < 300 mm	Cap/han/tag/ mark/rel > 300 mm	Indirect mortality < 300 mm	Indirect mortality > 300 mm
M-ML-00	Pahsimeroi River	Salmon	Electrofishing			2	1				
M-ML-00	Pahsimeroi River	Salmon	Snorkel		1						
M-ML-00	Panther Creek	Salmon	Snorkel		1						
R-LH-00	Redfish Lake	Salmon	Snorkel		25						
H-BS-00	Redfish Lake Creek	Salmon	Weir							1	
M-ML-00	Redfish Lake Creek	Salmon	Snorkel		1						
R-LH-00	Redfish Lake Creek	Salmon	Weir				1				1
M-ML-00	Salmon River	Salmon	Snorkel	1	1						
R-BL-00	Salmon River	Salmon	Screw trap			6	2				
H-BS-00	Salmon River - SFH	Salmon	Weir			1	25				13
M-ML-00	South Fork Williams Creek	Salmon	Electrofishing								
M-ML-00	Squaw Creek	Salmon	Electrofishing			23					
M-ML-00	Twin Creek	Salmon	Electrofishing			59					
M-ML-00	Valley Creek	Salmon	Electrofishing			5					
M-ML-00	Vine Creek	Salmon	Electrofishing			1					
M-ML-00	West Fork Hayden Creek	Salmon	Electrofishing			38	8				
M-ML-00	West Fork North Fork Salmon River	Salmon	Electrofishing			1					
	Subtotal			49	105	445	51	1	0	1	14
	TOTALS			52	106	453	51	1	0	1	14

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Table 9. Known unpermitted take and angler catch and release of bull trout in Idaho, 2000.

Number	Body of Water	IDFG Admin Region	Sampling Method	Caught/ released < 300 mm	Caught/ released > 300 mm	Mortality < 300 mm	Mortality > 300 mm
E-CW-00	North Fork Clearwater River	Clearwater	Public angler				
E-CW-00	South Fork Clearwater River	Clearwater	Public angler				
E-MC-00	East Fork South Fork Salmon River	McCall	Public angler				
E-MC-00	Little Salmon River	McCall	Public angler				
E-MV-00	South Fork Boise River	Magic Valley	Public angler		3		
E-PH-00	Grouse Creek	Panhandle	Public angler				
E-PH-00	Lake Pend Oreille	Panhandle	Public angler				
E-SA-00	Alturus Lake	Salmon	Public angler				
E-SA-00	Redfish Lake	Salmon	Public angler				
Unpermitted	Fish Lake	Clearwater	Public angler				8
Unpermitted	Lake Pend Oreille	Panhandle	Public angler				
Unpermitted	Lightning Creek	Panhandle	Public angler				
Unpermitted	South Gold Creek	Panhandle	ATV			Redd destroyed	
Unpermitted	Alturus Lake	Salmon	Creel survey				
M-LB-00	Salmon River	Clearwater	Creel survey	12	91		
R-LH-00	Alturus Lake	Salmon	Creel survey	5	6		
R-LH-00	Redfish Lake	Salmon	Creel survey	11	11		
	TOTAL			28	111		8 2

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Table 10. Summary of Salmon screen shop activities during 2000. Codes are water name abreviations and mile marker on stream.

			Nev	v Screens o		ned		Diversion Da	ms	P	ump Scree	ens		
Sites Treated	Screens Replaced	Screens Eliminated	Drums	Infiltration		Plates	Step-up Pools		Eliminated		Self		Headgates	Safety Fence
81	7	4	0	1	3	0	0	1	0	60	0	6	2	2
	L-19	S-3A		SWmC-01	S-04A			S-5,6,7		LP-0.8		SP-330.2	S-5/6/7	S-28
	L-30	S-26			SEF-18A					LP-31.6		SEFP-6.8	L-22A/23	L-30
	L-43	S-29			SWC-01/02					LSP-9.5		CMFP-85.6		
	S-2	S-33B								LSP-14.7		CMFP-97.8		
	S-20									LSP-11.3		CMFP-86.5		
	S-28									LSP-13.8		CMFP-87.5		
	S-32									LSP-13.4				
										LSP-18.7				
										LSP-13.9				
										LSP-14.5				
										LSP-14.53				
										LSP-12.2				
										LSP-14.3				
										LSP-13.8				
										LSP-16.2				
										LSP-13.5				
										LSP-12.5				
										LSP-3.9				
										LSP-10.5				
										LSP-12.4				
										LSP-12.3				
										LSP-13.3				
										LSP-9.1				
										LSP-6.3				
										LSP-13.45				
										LSP-13.92				
										LSP-14.0				

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			Nev	v Screens or Divers		ned	г	oiversion Dar	ms	D	ump Scre	ans		
tes	Screens	Screens		Divers	10115		Step-up	iversion Dai	115	г	Self	2115		Saf
ated	Replaced	Eliminated	Drums	Infiltration	Modular	Plates	Pools	Improved	Eliminated	Passive		Eliminated	Headgates	Fei
	•							•	•	LSP-13.6				
										LSP-13.61				
										LSP-6.9				
										LSP-265.0				
										PP-5.6				
										PP-9.3				
										SP-250.3				
										SP-258.8				
										SP-279.7				
										SP-302.7				
										SP-311.6				
										SP-315.3				
										SP-317.0				
										SP-317.01				
										SP-329.2				
										SP-329.21				
										SP-330.1				
										SP-354.0 SP-351.8				
										SEFP-10.5				
										SEFP-10.5				
										SNFP-0.92				
										SNFP-10.9 SNFDCP- 0.52				

104.2 CMFP-80.0

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Table 10. Continued.														
			New Screens on Unscreened Diversions			Diversion Dams			Pump Screens					
Sites	Screens	Screens					Step-up				Self			Safety
Treated	Replaced	Eliminated	Drums	Infiltration	Modular	Plates	Pools	Improved	Eliminated	Passive	Cleaning	Eliminated	Headgates	Fence
										CMFP-84.5				
										CMFP-84.2				
										CMFP-86.4				
										CMFP- 86.42				
										CMFP-86.8				
										CMFP-86.2				

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Table 11. Personnel that provided bull trout information.

Permit number	Agents	Employer/contractor
F-01-91	Joe M. DuPont	IDL
F-02-00	Douglas L. Bradley	USFS
F-02-90	Howard L. Burge	FWS
F-03-99	Chris Karchesky	UI
F-04-96	Don J. Conklin	Chadwick Ecological Consultants
F-05-00	Jennifer Weitkamp	Parametrix for Avista
F-05-95	Bart L. Gamett	USFS
F-07-00	Dennis L. Scarnecchia	UI
F-07-99	Shanda DeKome	USFS
F-09-93	Jim Chandler	IPC
F-10-99	Tammy Salow	BOR
F-11-96	Robert Steed	IDEQ
F-13-99	Todd Bennett	NWFS
F-15-99	Joe DosSantos	Avista
F-17-00	Andrew Whitely	UM
F-22-92	Ken Lapla	IPC
F-25-89	Terry Meret	USGS
F-26-84	Robert Hughes	Dynamic Corp
F-31-88	Steve Achord	NMFS
F-31-92	Dennis L. Scarnecchia	UI
F-51-90	Russ Thurow	USFS
F-63-92	Bruce Rieman	USFS
F-86-94	David Mays	USFS
IDFG	Location	
Allen, Dale	McCall	
Apperson, Kim	McCall	
Barrett, Larry	Lewiston	
Brostrom, Jody	Lewiston	
Curet, Tom	Salmon	
Fredericks, Jim	Coeur d'Alene	
George, Brad	Asahka	
Hebdon, Lance	Nampa	
Hillls, Kent	Oxbow	
Horner, Ned	Coeur d'Alene	
Janssen, Paul	McCall	
Kline, Paul	Eagle	
Larkin, Mike	Salmon	
Leth, Brian	Nampa	
Marcuson, Pat	Salmon	
Paragamian, Vaughn	Coeur d'Alene	
Schiff, Danielle	Lewiston	
Snyder, Brent	Stanley	
Steiner, Ralph	Riggens	
Thompson, Bruce	Clark Fork	

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